State Of Montana

Department of Natural Resources and Conservation

FOR FY2010 - FY2015 IT PLAN UPDATE

Version 1.0 – March 2010

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EXECUTIVE SUMMARY

The impact of new technologies in the past two years can be easily seen during meetings at DNRC. Employees across the state have taken advantage of new video conferencing systems to connect with colleagues in remote offices – reducing travel time and expenses for the agency. Expansion of the agency video conferencing system is planned in FY10 and FY11 to connect more remote offices such as Glasgow, Havre and Libby to the agency video network.

Significant progress has been made in implementation of Geographic Information System technology within the agency. A number of current applications are being evaluated to determine where GIS information can be used to enhance the application for both internal users and the public. A simple GIS application under development will provide agency users quick access to GIS resources and aid in agency planning. Expanded use of GIS is part of this IT plan as well as the agency GIS plan which is referenced in this plan.

Management of documents is a critical need identified within DNRC. Every division from Centralized Services to Water Resources has both electronic and paper documents that are critical to operation of the agency. DNRC is in the process of assessing options for imaging paper documents into an electronic records management system. This work will integrate with efforts to improve storage and retrieval of electronic files.

In addition to electronic document management, DNRC has plans for updates to several critical applications and databases. The Water Rights system is being evaluated for an update, enhancements continue on the Contracts and Grants System (CGS) and the Restoration Map application. New systems are planned for grant applications and tracking, document catalogs, dam safety inventory and dam seepage monitoring, state revolving fund, and online lease and permit payments.

The agency anticipates building new eGovernment services to access updated applications and databases so the public can interact with the agency online for lease and permit payments, bids and grants.

DNRC is in the midst of an update to its Trust Land Management System (TLMS) with a planned migration from Access 2003 to a .NET application front end. A more robust SQL Server database is in place for this application and a dozen other agency systems. The agency is working on .NET and web-based applications for grant tracking, fire tracking and accounting, hazard reduction agreements, dam safety, project tracking, restoration projects and numerous other critical business functions of the agency.

Supporting all of these IT goals will require a robust IT infrastructure. DNRC is planning a refresh of files servers in DNRC offices across the state. Those servers will be migrated to Windows Server 2008. Ensuring strong connections between those servers and remote users and the central IT network will be very important – especially with growth of GIS activities. Improved backup and disaster recovery capability, including offsite backups for all file servers, will be implemented in FY2011 and FY2012.

One significant need of the agency is to move data from older personal databases to newer supported applications, rebuild some applications to meet agency needs and train users on the new systems.

SECTION 1: Agency Contact INFORMATION

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SECTION 2: AGENCY IT MISSION

2.1 Agency IT Mission Statement

DNRC will use IT services to provide quality, cost-effective support for our customers as we work to accomplish our agency mission. We will strive to optimize existing technology and implement new technology that will improve productivity, manage costs and meet the business needs of the agency.

SECTION 3: AGENCY SECURITY PROGRAM

3.1 Security Program

Pursuant to §2-15-114, MCA DNRC has designated Rick Bush, IT Manager, as the agency Information Security Manager.

In addition, the agency has revised its ITPolicy to incorporate the Statewide Policy for Information Security Programs. This policy describes the framework for development of a comprehensive, collaborative security program to ensure the integrity, availability and confidentiality of state information systems and the data contained in those systems.

As established in the state Information Security Policy, DNRC will use the National Institute of Standards and Technology (NIST) Risk Management Framework as the method and standard of performance for the department information security program.

DNRC's objectives in FY11 are to:

- Implement the applicable IS security standards for the agency
- Develop an appropriate infrastructure for security management.
- Conduct security awareness training
- Conduct periodic testing and evaluation of the effectiveness of information security policies, practices and controls, and
- Develop a process for planning, implementing, evaluating and documenting remedial actions as well as develop procedures for detecting, reporting and responding to security incidents.

DNRC is establishing an agency IT Security Working Group as a subcommittee of the agency IT Steering Committee. The IT Security Working group, led by the agency Information Security Manager, will:

- Plan, both through the budget process and through personnel development, for implementation of an agency IS security program;
- Provide a detailed roadmap of anticipated security policy implementation;
- Provide for risk assessment of agency IS systems;
- Develop a plan to protect any private data in agency information systems,
- Communicate the plan to the leadership team, division administrators and agency staff.

SECTION 4: AGENCY IT PLAN – GOALS & OBJECTIVES

4.1 Goals/Requirements

Goal Number 1:

ITG 1   Develop DNRC-wide applications that meet agency business requirements, reduce cost and improve efficiency of operations

Description: Examine current systems and business processes such as document storage and archiving, common-application needs, redundant storage, shared resources and workflows to provide common IT systems that are used across divisions.

Benefits: Eliminates redundant systems, provides for central development of shared resources. Streamlines upgrades, maintenance and training for applications.

Does this goal support the State IT Strategic Plan? If so, how? Develop IT resources in an organized, deliberative and cost-effective manner. Establish agency communities of interest to gain economies of scale through shared dollars and human resources. Share IT resources to achieve economies of scale.

Supporting Objective/Action

ITO 1-1   Scanning and storage of critical department documents

Describe the business requirements or business problem driving this objective: Long-term records management, storage and retrieval is a major need of DNRC. DNRC divisions have storage rooms full of documents that must be retained for long periods of time as mandated by state records management rules. The goal is to establish a document scanning and storage system or process that provides for archival storage of documents and easy retrieval.

Describe the benefits to be derived from the successful completion of this objective: Improved business operations through improved document retrieval, reduced reliance on paper storage. Reduced chance or record loss due to natural disaster.

Describe the anticipated risks associated with this objective: Cost of deploying the system and funding from the Legislature. Additional staff or reassignment of staff to scan documents. User training and implementation. Continued need to retain paper documents to comply with existing statutes.

What is the timeframe for completion of this objective: Agency-wide evaluation of the scope of this project is underway in early 2010. A pilot project is anticipated and will be evaluated to provide a system for document scanning and storage.

Describe the critical success factors associated with this objective: A centralized system is in place for document scanning and storage and critical records are available in electronic format.

Supporting Objective/Action

ITO 1-2   Migrate agency servers from Novell to Windows

Describe the business requirements or business problem driving this objective: Novell has migrated its file and print servers from Netware to Open Enterprise Server which runs on a SuSE Linux operating system. General support for the Netware 6.5 ended in March 2010 and extended support ends in March 2012. Rather than having staff learn a new operating system and convert our current servers to Novell OES, the agency is migrating to Windows Server 2008 file servers.

Describe the benefits to be derived from the successful completion of this objective: The agency already has several Windows servers in operation to meet agency needs. A common operating system for all agency servers will reduce training needs, provide a common platform for

agency applications, provide for a single password setup, and improve remote support. The system will improve the backup capabilities of the agency for disaster recovery. The agency will also be able to reduce the cost of Novell licenses.

Describe the anticipated risks associated with this objective: Disruption of business activities in remote offices during the switchover and possible loss of files. Lack of funding for replacement servers needed in remote locations.

What is the timeframe for completion of this objective: Migration of six offices is planned for spring 2010 and this project will convert more than half of DNRC users over to Windows servers. The remaining servers (approximately 18) will be converted during FY 2011. About half of the replacement servers will be new equipment based on current server refresh budgets.

Describe the critical success factors associated with this objective: Replacement of six servers by June 2010, replacement or upgrade of all agency servers by June 2011.

Supporting Objective/Action

ITO 1-3   Expenditure tracking system for divisional and bureau budgets

Describe the business requirements or business problem driving this objective: Division staff in agency offices have requested real-time tracking of expenditures against budgets. The goal is more efficient use of resources, budget management and coordination of spending.

Describe the benefits to be derived from the successful completion of this objective: The greatest benefit is keeping programs from over expending budgets because of delays in getting information. Better ability to transfer funds as needed to meet agency needs

Describe the anticipated risks associated with this objective: Agreement between operating units on how the system should work. Staff time or budget to build the application. Connecting the information with SABHRS.

What is the timeframe for completion of this objective: This project is on hold until funding is available. The first step will be development of project requirements. A decision will then be made on proceeding with either internal development, purchase of COTS software or hiring a contractor.

Describe the critical success factors associated with this objective: Efficient budget management by divisions. Real-time tracking of expenditures and expenses.

Supporting Objective/Action

ITO 1-4   Expand Video Conferencing

Describe the business requirements or business problem driving this objective: DNRC has offices all across the state. Cost and time for travel impacts staff ability to accomplish their jobs effectively. Expanded use of video conferencing will reduce travel costs and time while providing for effective communication between DNRC staff in locations across Montana.

Describe the benefits to be derived from the successful completion of this objective: Reduce travel, improve staff efficiency, reduce energy costs for the agency, and improve communication.

Describe the anticipated risks associated with this objective: Additional costs for use of video in multiple locations. Impact on the state network.

What is the timeframe for completion of this objective: As of March 2010, DNRC has video conferencing systems in Helena (2), Missoula (2) Kalispell, Lewistown, Bozeman and Miles City and shares a system with DEQ in Billings. The agency plans to expand video conferencing to Havre, Glasgow, Libby and other remote offices. Additional units are planned for Helena, Missoula and Kalispell as budget allows.

Describe the critical success factors associated with this objective: Reduced travel time and cost. The system is used extensively for agency meetings involving staff in remote offices. The agency has saved an estimated $119,000 this biennium with its current system.

Supporting Objective/Action

ITO 1-4   Evaluate a software system for performance management

Describe the business requirements or business problem driving this objective: Efficient management of DNRC business operations requires efficient evaluation of the staff running those systems. A highly-functional performance management system is needed to allow managers to evaluate employee performance including knowledge, skills and abilities, training needs and areas of improvement.

Describe the benefits to be derived from the successful completion of this objective: Moving from a paper-based performance management system will allow for more efficient use of management time, ability to track performance metrics across the agency and improved performance tracking for both managers and employees.

Describe the anticipated risks associated with this objective: Cost of purchasing or developing a performance management system. Employee acceptance.

What is the timeframe for completion of this objective: DNRC plans to evaluate a performance management system provided by Halogen Software. The evaluation will be used to chart critical agency needs in performance management and develop further recommendations.

Describe the critical success factors associated with this objective: Define the critical needs in a software performance management system. Purchase or develop a system meeting agency requirements.

Goal Number 2:

ITG 2   Expand agency information available over the Internet and expand access to eGovernment services for DNRC.

Description: Demand is increasing for electronic access to agency information and services. The goal is to expand information available on the agency website and create at least three new eGovernment services for the public by 2012.

Benefits: Electronic access to information and services provided by DNRC to the public

Does this goal support the State IT Strategic Plan? If so, how? Continue to encourage and promote the use of innovative technologies for delivering government services. Improve government services by expanding eGovernment services.

Supporting Objective/Action

ITO 2-1   Expand the current document catalog system.

Describe the business requirements or business problem driving this objective: DNRC has document catalog applications in place for the St. Mary Project, photo database and various Water Resources Division projects. The system was developed so additional document catalogs could be created for projects or business needs.

Describe the benefits to be derived from the successful completion of this objective: A configurable application for tracking documents related to agency projects and activities. A standard format for storing documents related to critical agency projects.

Describe the anticipated risks associated with this objective: Agreement on a common format or database configuration.

What is the timeframe for completion of this objective: The code for the system is being modified to allow for easy configuration for additional document storage. Further catalogs are being built as needed by the divisions.

Describe the critical success factors associated with this objective: Expansion of the system to include critical department projects. Coordination of the effort with the records retention and retrieval needs of the agency.

Supporting Objective/Action

ITO 2-2   Expand DNRC eGovernment services available to the public.

Describe the business requirements or business problem driving this objective: Agency customers are asking for eGovernment services for conducting business with DNRC. The agency has deployed a virtual cashier payment system to allow customers to pay water fees with credit cards at agency offices. However, customers still mail in applications and payments or mail in payments for leases. Projects identified for development in this plan include:

1. Create a water rights transfer application.
2. Accept real estate lease payments online
3. Improve access to agency Water Rights records
4. Improve the online nursery application
5. Improve public access to Trust Lands data
6. Develop a variety of GIS applications for access to agency data on restoration, state lands, water rights and timber sales.

Describe the benefits to be derived from the successful completion of this objective: Expanding and improving the ability of citizens and businesses to conduct business with the agency through secure, reliable online systems. Reduced costs for processing of payments, water rights transfers and requests for information.

Describe the anticipated risks associated with this objective: Access to resources for development of the new eGovernment services. Updates to current systems to accommodate eGovernment applications.

What is the timeframe for completion of this objective: Database updates are critical to moving forward with eGovernment services. Updates are in progress and should be completed in mid 2010. Development of new services is dependent on staff availability and funding.

Describe the critical success factors associated with this objective: Creating three or more new eGovernment applications for use by the public.

Supporting Objective/Action

ITO 2-3   Explore use of social media for public outreach.

Describe the business requirements or business problem driving this objective: DNRC has a variety of systems in place for public outreach. These include news releases, publications, websites, mailing lists, etc. The goal is to explore new methods of improving communications with constituents and the public.

Describe the benefits to be derived from the successful completion of this objective: Improved agency outreach and communications. Access to new audiences.

Describe the anticipated risks associated with this objective: Learning about social media (Facebook, Twitter, MySpace, etc). Potential negative feedback.

What is the timeframe for completion of this objective: The agency is looking at a pilot project to create a Facebook group for outreach for the agency.

Describe the critical success factors associated with this objective: Effective deployment of a Facebook page and information. Public use and acceptance of the new media information.

Goal Number 3:

ITG 3   DNRC Enterprise GIS

Description: Continue implementation of an Enterprise GIS system for DNRC to provide an organization-wide approach that facilitates the integration, implementation, operation and management of tabular and spatial information.

Benefits: All divisions within DNRC will benefit – particularly Water Resources, Trust Lands, Forestry, Conservation and Resource Development and Oil & Gas Conservation. The public will benefit from seeing GIS information in DNRC applications. Other state agencies will not have to recreate GIS data available from DNRC.

Does this goal support the State IT Strategic Plan? If so, how? Expand sharing and use of geographic data in government systems. Improve government services by expanding eGovernment services and Geographic Information Technology services.

Supporting Objective/Action

ITO 3-1   Continue to establish a coordinated GIS infrastructure

Describe the business requirements or business problem driving this objective: Continue implementation of an agency GIS infrastructure for the department for storage and access to GIS data, files and products. Interface with the state GIS enterprise databases.

Describe the benefits to be derived from the successful completion of this objective: A tiered approach to distribution of GIS data for use at the local, division, agency and state level. Replication of needed data from central location to offices where it is used.

Describe the anticipated risks associated with this objective: Cost and maintenance of the hardware needed to store and distribute the GIS information.

What is the timeframe for completion of this objective: Ongoing for FY2010 and FY2011.

Describe the critical success factors associated with this objective: Users will understand the structure for storage of GIS information and actively use the system for storage and distribution. The equipment for this GIS infrastructure is in place and expanded use is planned in FY 2010 and FY2011.

Supporting Objective/Action

ITO 3-2   Develop a simple GIS program for use in division business operations

Describe the business requirements or business problem driving this objective: Many DNRC applications and programs need a simple GIS mapping system for doing geographic analysis and planning. These include projects such as Hazard Reduction Agreement, timber sales or creation of a right-of-way. There is also a need for a simple mapping tool for agency employees who don't need a full-featured GIS application.

Describe the critical success factors associated with this objective: Deployment of a simple mapping application that can be used by agency staff and the public without installing expensive GIS software.

Describe the anticipated risks associated with this objective: Public demand for more applications.

What is the timeframe for completion of this objective: July 2010. Custom configuration for other uses ongoing.

Describe the critical success factors associated with this objective: Deployment of a mapping application and connection to two DNRC systems needing map information.

Supporting Objective/Action

ITO 3-3   Create centralized GIS data sets for DNRC and other agencies.

Describe the business requirements or business problem driving this objective: DNRC staff create GIS data sets in support of their operations. As these data sets are created they need to be shared with other divisions so they are not duplicated. Another need is the ability for divisions to enhance or expand data sets already in use for their needs and to benefit the agency. A specific example would a layer for flood plain information that may be used by water operations, water rights, trust lands and CARDD.

Describe the benefits to be derived from the successful completion of this objective: Improved sharing of GIS information. Establishing shared GIS data layers and determining methods for updating this information. Common GIS data layers will help identify priority areas for stewardship, forest and fire management.

Describe the anticipated risks associated with this objective: Conflicting needs for information. Incomplete data sets or layers. Need to constantly update the information

What is the timeframe for completion of this objective: Ongoing FY2010 and FY2011.

Describe the critical success factors associated with this objective: Establish or distribute two or more GIS data sets for use in the agency. Determine if they belong in Framework layers.

Supporting Objective/Action

ITO 3-4   Establish a thin-client system for access to GIS systems.

Describe the business requirements or business problem driving this objective: DNRC needs to provide access to GIS software and systems for remote offices without installing ESRI software on every workstation. Use of a Citrix system with GIS applications would allow occasional use by DNRC staff in the field

Describe the benefits to be derived from the successful completion of this objective: Reduced licensing cost, use of latest software. Ability to run GIS software on lower-end workstations.

Describe the anticipated risks associated with this objective: None

Describe how this objective supports the agency IT goal: Efficient deployment of IT resources.

What is the timeframe for completion of this objective: Deployed.

Describe the critical success factors associated with this objective: Expanded use of Citrix for light GIS users is expected during FY2010 and 2011.

Goal Number 4:

ITG 4   Improve efficiency of Water Resource Division IT applications

Description: Continue legislatively mandated water rights adjudication and expand access to water rights, water use, emergency action plans, seepage monitoring and dam safety information used inside the department and by the public. Upgrade applications to the latest development standards as determined by the IT Bureau and ITSD.

Benefits: Improved access to information used in decision making within the agency and by the water courts. Improved access to information by citizens and businesses.

Does this goal support the State IT Strategic Plan? If so, how? Develop IT resources in an organized, deliberative, and cost-effective manner.

Supporting Objective/Action

ITO 4-1   Emergency Action plan electronic storage and tracking

Describe the business requirements or business problem driving this objective: Provide a system for Water Resources Division to manage and access emergency action plans and digital files

Describe the benefits to be derived from the successful completion of this objective: Improved access to emergency action plans and electronic access to plans throughout the division. Improved public safety through secure, distributed access to information

Describe the anticipated risks associated with this objective: Funding for this project is not finalized. Federal funding request anticipated in September 2010.

What is the timeframe for completion of this objective: TBD

Describe the critical success factors associated with this objective:

Migration of emergency action plans to electronic format for updating and distribution.

Supporting Objective/Action

ITO 4-2   Expand electronic document storage and retrieval system.

Describe the business requirements or business problem driving this objective: Expand use of the agency document tracking system to include storage of critical Water Operations Bureau and Water Management Bureau project documents.

Describe the benefits to be derived from the successful completion of this objective: Improved access to project documents for business operations.

Describe the anticipated risks associated with this objective: Current systems include the Tongue River Document tracker. Other projects will be added to the system as needed.

What is the timeframe for completion of this objective: Ongoing FY2010 and FY2011

Describe the critical success factors associated with this objective:

Expand document tracking system to two more document categories.

Supporting Objective/Action

ITO 4-3   Continue document scanning for Water Rights

Describe the business requirements or business problem driving this objective: Water Resources Division is in the midst of a multi-year program to scan all water rights records into digital format. This information is needed for water rights adjudication, water courts and water rights management. Expansion of this system for records compiled by the Reserve Water Rights Compact Commission is anticipated in FY2011.

Describe the benefits to be derived from the successful completion of this objective: Continued scanning will create a complete digital record of water rights in the State of Montana. This will replace use of microfilm for record keeping.

Describe the anticipated risks associated with this objective: Continued funding

What is the timeframe for completion of this objective: 2013

Describe the critical success factors associated with this objective:

Progress is being made on this project with completion anticipated by 2013. A project is planned to determine if the staff and expertise developed in scanning Water Rights documents can be transferred to other needs within the agency.

Supporting Objective/Action

ITO 4-4   Update Dam Safety National Dam Inventory and permitting database

Describe the business requirements or business problem driving this objective: Updates are needed to this system to allow for improved business decision making.

Describe the benefits to be derived from the successful completion of this objective: Improved access to dam safety information, improved performance, and expanded search.

Describe the anticipated risks associated with this objective: Funding and staff time are limited for working on this application

What is the timeframe for completion of this objective: TBD

Describe the critical success factors associated with this objective: Improved system for tracking dams in Montana and monitoring their status.

Supporting Objective/Action

ITO 4-5   Update dam seepage monitoring database and application

Describe the business requirements or business problem driving this objective: Updates are needed to this system to allow for improved business decision making.

Describe the benefits to be derived from the successful completion of this objective: Improved access to dam seepage information, improved performance, and expanded search. Improvements to public safety through better monitoring of dams.

Describe the anticipated risks associated with this objective: Funding and staff time are limited for working on this application

What is the timeframe for completion of this objective: TBD

Describe the critical success factors associated with this objective:

Creation of additional menus, search capabilities and data storage.

Supporting Objective/Action

ITO 4-6   Evaluate needs and update the Water Rights application and database

Describe the business requirements or business problem driving this objective: The current Water Rights database application needs updating to meet business needs of the agency and the state Water Courts.

Describe the benefits to be derived from the successful completion of this objective: Improved data integrity, agency and public access to data, better business processes.

Describe the anticipated risks associated with this objective: Funding and staff time.

What is the timeframe for completion of this objective: Evaluate the current system to determine what improvements are needed, allocate state time for making the improvements, schedule and implement. Timeline to be developed

Describe the critical success factors associated with this objective:

Updates and modernization of the database and application. Improved public access to data. .

Goal Number 5:

ITG 5   Improve central applications for managing Contracts, Grants, Loans, Restoration Projects and other systems used to manage DNRC resources

Description: Continue improvements to agency systems for tracking contracts, grants, loans, restoration projects, legal documents, computer inventory and special projects.

Benefits: All divisions within DNRC will benefit from improved systems for tracking operational information within the agency.

Does this goal support the State IT Strategic Plan? If so, how? Yes. Develop IT Resources in an organized, deliberative and cost-effective manner. Gain economies of scale through shared dollars and human resources.

Supporting Objective

ITO 5.1   Improve and maintain the agency CGS tracker

Describe the business requirements or business problem driving this objective: CGS is the main DNRC system for tracking contracts and grants. Work on the system will improve efficiency, data reporting and fiscal compliance.

Describe the benefits to be derived from the successful completion of this objective:

Better fiscal management and tracking of contracts and grants made by the agency. Ability to determine where state dollars are spent on agency projects and state grants administered by DNRC.

Describe the anticipated risks associated with this objective: Development of the system may take longer than anticipated. System may not meet all divisional goals.

What is the timeframe for completion of this objective: Ongoing FY 2010 and FY2011

Describe the critical success factors associated with this objective: Incorporation of loans is planned in FY2010 or FY2011. The system is currently in operation and contains 95 percent of features requested by users. Additional updates are planned on a regular basis to meet agency reporting and tracking needs.

Supporting Objective

ITO 5.2   Continue development of the state Restoration Map Application.

Describe the business requirements or business problem driving this objective: DNRC deployed a Restoration Map Application in December 2008. The first phase was a GIS-based application for showing the location and basic attributes of restoration projects in Montana. Phase 2 is designed to improve the interface for searching for restoration project information, increase accuracy and expand the scope of projects in the system. The new system will allow other agencies to directly upload restoration grant information to the system.

Describe the benefits to be derived from the successful completion of this objective: Better tracking of restoration dollars and projects. Reduced project overlap and improved efficiency.

Describe the anticipated risks associated with this objective: Unknown data types, incompatible databases or information. Reluctance on the part of state agencies to participate.

What is the timeframe for completion of this objective: The Restoration Map Application is in operation. Phase 2 of this project is in development and scheduled for completion in spring 2010.

Describe the critical success factors associated with this objective: Development of an application to gather and distribute information on restoration projects from state agencies.

Supporting Objective

ITO 5.3   Establish a program for tracking the state revolving fund

Describe the business requirements or business problem driving this objective: Improved method for tracking the state revolving fund.

Describe the benefits to be derived from the successful completion of this objective: Better fiscal management of state resources.

Describe the anticipated risks associated with this objective: Time and staffing.

Describe how this objective supports the agency IT goal: Reduces staff time for tracking the revolving fund and entering data from the funds into SABHRS

What is the timeframe for completion of this objective: FY2011. This application will be developed with internal staff.

Describe the critical success factors associated with this objective: Development of an application or methods of better handling revolving fund information.

Supporting Objective

ITO 5.4   Improve the quality of the CSD Legal Tracker

Describe the business requirements or business problem driving this objective: Legal Tracker is a document management system in use by legal staff to research legal issues in the department.

Describe the benefits to be derived from the successful completion of this objective: Access to case files critical to legal research by agency lawyers. Migration of a web application and migration of the database to SQL Server will improve access, functionality and reliability.

Describe the anticipated risks associated with this objective: Time and staffing.

What is the timeframe for completion of this objective: Summer FY2010

Describe the critical success factors associated with this objective: Migration from Oracle to SQL Server and rewrite of the application front end for a web server.

Goal Number 6:

ITG 6   Enhance the Trust Lands Management System (TLMS)

Description: Continue updates to TLMS, migrate to a .NET application system and add new business management processes to TLMS.

Benefits: Improved management of state trust land assets, staff access to trust data and customer access to trust land information.

Does this goal support the State IT Strategic Plan? If so, how? Develop IT resources in an organized, deliberative and cost-effective manner. Continue to encourage and promote the use of innovative technologies for delivering government services.

Supporting Objective

ITO 6.1   Convert TLMS front-end from Access 2003 to .NET

Describe the business requirements or business problem driving this objective: The database used for TLMS is SQL Server 2005 while the front-end application is still in Access. Maintenance of the system and continued improvement requires moving to a .NET architecture.

Describe the benefits to be derived from the successful completion of this objective: Stable and robust TLMS front-end interface and business processes, capable of linking to SQL Server software upgrades.

Describe the anticipated risks associated with this objective: Conversion of TLMS front-end from Access 2003 to .NET make take longer than anticipated, or may not meet division goals.

What is the timeframe for completion of this objective: TLMS front-end converted to .NET and implemented in TLMS by the end of FY2010.

Describe the critical success factors associated with this objective: TLMS compatibility and stability with current and future versions of SQL Server software.

Supporting Objective

ITO 6.2   Post-transition TLMS improvements.

Describe the business requirements or business problem driving this objective: There are improvements needed to the TLMS application that can't be done efficiently during the transition from Access to .NET. A number of improvements, code refactoring and search capabilities will be added to TLMS once the conversion is complete.

Describe the benefits to be derived from the successful completion of this objective: Improved management of trust land assets and increased revenue generation for trust beneficiaries.

Describe the anticipated risks associated with this objective: Improvements may cause conflicts with current operations. Improvements may take longer than anticipated, or may not meet all divisional goals.

What is the timeframe for completion of this objective: Ongoing FY2010 and FY2011.

Describe the critical success factors associated with this objective: Ability of division staff to efficiently access and utilize spatial land data.

Supporting Objective

ITO 6.3   Continue Integration of TLMS with Enterprise GIS

Describe the business requirements or business problem driving this objective: Staff require easy access to current and uniform spatial data with a minimum of local storage, backup and maintenance.

Describe the benefits to be derived from the successful completion of this objective: Improved management of trust land assets and increased revenue generation for trust beneficiaries. Decreased time and cost expended on maintenance of spatial data. Improved collaboration among staff.

Describe the anticipated risks associated with this objective: Implementation of Enterprise GIS capability may take longer than anticipated, or may not meet all divisional goals.

Describe how this objective supports the agency goal: Provides efficient use of staff resources and ability to better manage trust land assets.

What is the timeframe for completion of this objective: Ongoing FY2010 and FY2011.

Describe the critical success factors associated with this objective: Ability of division staff to efficiently access and utilize spatial land data.

Supporting Objective

ITO 6.4   Enhance web access to TLMS data

Describe the business requirements or business problem driving this objective: Much of the data in TLMS is useful to the public and potential lessees. Examples include potential oil and gas lease opportunities, land banking sales and associated documents, status of state trust lands, real estate management and agricultural leases. The goal is to make more data available to public and improve the functionality of the web access to the application.

Describe the benefits to be derived from the successful completion of this objective: Improved access for customers and public, improved functionality and navigation. Integration

with the common look and feel of agency websites. Access to eGovernment services related to TLMS will be incorporated with the improved web access.

Describe the anticipated risks associated with this objective: Implementation and expansion of web access may take longer than anticipated, or may not meet all goals of division staff, customers and public.

What is the timeframe for completion of this objective: Development is anticipated to begin in FY2011

Describe the critical success factors associated with this objective: Customers and public able to interact with trust land programs and obtain data they need and desire.

Supporting Objective

ITO 6.5   Trust Land document management and retrieval.

Describe the business requirements or business problem driving this objective: Critical land ownership, easement, leasing and other documents need to be converted to optical format to make them available to agency staff, and to ensure critical documents will not be lost through human error or deterioration of documents themselves.

Describe the benefits to be derived from the successful completion of this objective: Time and resource efficient availability and security of critical land ownership and related documents.

Describe the anticipated risks associated with this objective: Implementation may take longer than anticipated or may not meet division goals for access to equipment, capacity of equipment and software to convert documents in a timely and cost effective manner.

What is the timeframe for completion of this objective: Currently within Trust Land Management Division a number of legal documents are scanned for online access. These include granted and acquired easements and agricultural lease documents. The scanning is done without optical character recognition so no keyword searches are available. The goal is a standard document scanning and retention system with keyword or whole text search capabilities. This system will be part of the agency-wide document storage and management system identified in Goal 1. Development is dependent on budget allocation.

Describe the critical success factors associated with this objective: Key documents readily accessible through TLMS, with all key documents converted to optical format and securely stored.

Goal Number 7:

ITG 7   Enhance a variety of applications in Trust Land Management Division.

Description: Update to critical applications within TLMD that support programs such as Ag and grazing, timber sales, timber management, minerals management and real estate management.

Benefits: Improved management of state trust land assets, staff access to trust data and customer access to trust land information.

Does this goal support the State IT Strategic Plan? If so, how? Develop IT resources in an organized, deliberative and cost-effective manner. Continue to encourage and promote the use of innovative technologies for delivering government services.

Supporting Objective

ITO 7-1   Develop a calendar recall system

Describe the business requirements or business problem driving this objective: Often in trust land management a lease or tract of land has a need for follow-up action. For example, an HDP analysis may be necessary following a timber sale. TLMD is in need of a system to track follow-up or recurring activities on state lands. This system would provide for recall of activities and track completion.

Describe the benefits to be derived from the successful completion of this objective:

Better management of state lands through timely management actions. A specific version of this system may need to be developed for tracking timber sale tasks.

Describe the anticipated risks associated with this objective: Design and implementation of a user friendly interface may take longer than anticipated or may not meet division goals.

What is the timeframe for completion of this objective: The first step in FY2010 will development of the requirements for the system and determination as to whether a COTS system is available or a custom system needs to be built. It may also be possible to integrate with the new TLMS system.

Describe the critical success factors associated with this objective: System for tracking future agency actions related to state trust lands.

Supporting Objective

ITO 7-2   Online lease and permit payments

Describe the business requirements or business problem driving this objective: Customers for certain types of Trust Land leases and permits have requested an option to pay their lease, rental and permit fees online. This system would be more convenient than coming to an office to make a payment or mailing in a payment.

Describe the benefits to be derived from the successful completion of this objective: Ability of customers to conveniently access the agency and make certain payments in the manner they prefer. This would include credit card and echeck payments.

Describe the anticipated risks associated with this objective: Implementation of credit card payment capability may take longer than anticipated or may not meet division goals.

What is the timeframe for completion of this objective: Implement operational system by FY2011. Dependent on finishing updates to the TLMS system.

Describe the critical success factors associated with this objective: Customers able to make certain payments online via credit card.

Supporting Objective

ITO 7-3   Develop an online competitive bidding application

Describe the business requirements or business problem driving this objective: Development of an online competitive bidding application would make it easier for potential lessees to bid on state land leases.

Describe the benefits to be derived from the successful completion of this objective: Ability for potential leasing customers to place bids for state leases. Simplified processing of bids, particularly for the Real Estate Management Bureau.

Describe the anticipated risks associated with this objective: Reluctance of customers to bid online. Coordination of bidding between online and other types of bids may cause conflicts.

What is the timeframe for completion of this objective: Implement operational system by FY2011. Dependent on finishing updates to the TLMS system.

Describe the critical success factors associated with this objective: Customers able to conduct bidding online with DNRC.

Supporting Objective

ITO 7-4   Migrate MT Cruiser application to .NET application

Describe the business requirements or business problem driving this objective: Currently MT Cruiser is an Access database project that needs to be converted to a more robust platform to meeting agency needs.

Describe the benefits to be derived from the successful completion of this objective: Migration of the MT Cruiser will allow better integration with the TLMS application, agency GIS

data and allow for additional features in a more robust application development environment.

Describe the anticipated risks associated with this objective: Employee time constraints and budget uncertainty.

What is the timeframe for completion of this objective: Implement operational system by FY2011.

Describe the critical success factors associated with this objective: Development of a replacement system that meets divisional needs.

Supporting Objective

ITO 7-5   Develop an automated backup system for user personal computers

Describe the business requirements or business problem driving this objective: The agency relies on users to store critical documents on agency servers where the files are backed up. Some users store documents directly on their PCs and data may be lost if the computer crashes.

Describe the benefits to be derived from the successful completion of this objective: An automated backup system would allow users to store files locally on their computer, but have a backup of the files on a server.

Describe the anticipated risks associated with this objective: Development of an internal system will require continued maintenance. User communications and training would be critical for successful operation. Windows updates may make this system obsolete.

What is the timeframe for completion of this objective: Not set.

Describe the critical success factors associated with this objective: Improved backup of user data

Supporting Objective

ITO 7-6   Develop division-specific toolbars for agency Simple GIS application

Describe the business requirements or business problem driving this objective: Users in the field and Trust Lands bureaus need a simple interface and specific GIS tools to perform GIS tasks related to their business operation.

Describe the benefits to be derived from the successful completion of this objective: A simple GIS application with custom toolbars for the Real Estate Management, Minerals Management, Fire Management as well as the Ag and Grazing bureau would facilitate divisional operations and management.

Describe the anticipated risks associated with this objective: User acceptance of a simple GIS application. Continued ability to develop and customize the application.

What is the timeframe for completion of this objective: The simple GIS application is slated for deployment in spring 2010. Enhancements are scheduled throughout FY 2010 and FY2011.

Describe the critical success factors associated with this objective: Improved use of GIS within the agency.

Supporting Objective

ITO 7-7   Develop a Right-of-way database

Describe the business requirements or business problem driving this objective: Development of this data set will allow forester to determine legal access to proposed timber sales with greater ease.

Describe the benefits to be derived from the successful completion of this objective: This system and database will help in developing cost-share/reciprocal road maintenance fees. Right-of-way specialists and other DNRC employees can use this for determining legal access or planning staged acquisitions.

Describe the anticipated risks associated with this objective: Staff availability. Must be compatible with agency GIS systems and TLMS

What is the timeframe for completion of this objective: Dependent on development of the new TLMS application. Development would begin in FY2011.

Describe the critical success factors associated with this objective: Electronic access to Right-of-way records.

Goal Number 8:

ITG 8   Update and improve applications critical to operations of Forestry Division

Description: Continued work on applications that support the efforts of the Forestry division to fight fires, manage fire costs, safely deploy personnel and operate the state nursery.

Benefits: Improved fiscal management of divisional operations. Integration of separate systems and improved customer service.

Does this goal support the State IT Strategic Plan? If so, how? Develop IT resources in an organized deliberative and cost-effective manner. Utilize IT best practices to implement and manage information technology systems in a coordinated manner.

Supporting Objective/Action

ITO 8-1   Continue work on a flight log system

Describe the business requirements or business problem driving this objective: Compiling flight log information using paper forms is inefficient and time-consuming. An electronic system for entering and maintaining flight log information would improve flight operations.

Describe the benefits to be derived from the successful completion of this objective: A flight log application and database will provide timely statewide fire flight cost information to DNRC Forestry Division for submittal to the Office of Budget and Program Planning (OBPP). It should also improve operational efficiency and safety.

Describe the anticipated risks associated with this objective: Cost of developing the database. Also, the process of doing is still in the beginning stages.

Describe how this objective supports the agency IT goal: Improve fire flight billing process, making it more efficient, faster, and cost-effective. Evaluation of the data compiled can also be used in the operations budgeting and planning process.

What is the timeframe for completion of this objective: Pilot system was deployed in summer of 2009 with a decision on further progress planned for early 2010.

Describe the critical success factors associated with this objective:

Supporting Objective/Action

ITO 8-2   Implement statewide fleet management system.

Describe the business requirements or business problem driving this objective: DNRC has implemented a fleet management system but will be transitioning to the statewide fleet management system in 2010.

Describe the benefits to be derived from the successful completion of this objective: Better fleet maintenance history and expense data, especially as the fleet ages.

Describe the anticipated risks associated with this objective: DNRC has been directed to implement a fleet management system used by MDT.

Describe how this objective supports the agency IT goal: Effective use of state resources.

What is the timeframe for completion of this objective: End of FY2010

Describe the critical success factors associated with this objective: Inclusion of all agency vehicles in the statewide fleet management system.

Supporting Objective/Action

ITO 8-3   Agency fire mapper – upload to F1000

Describe the business requirements or business problem driving this objective: Need to move field data into fire management systems.

Describe the benefits to be derived from the successful completion of this objective: DNRC Fire Mapper is a handheld PC application that allows engine bosses to input fire information at the scene of an incident. The DNRC Fire Mapper application can then upload information into the F1000 fire reporting system maintained by DNRC. An interface needs to be developed to allow upload of the data.

Describe the anticipated risks associated with this objective: Ability to purchase additional hand-held units for the field. Funding constraints

What is the timeframe for completion of this objective: Ongoing FY2010 and FY2011

Describe the critical success factors associated with this objective: Successful development of the interface needed for data upload.

Supporting Objective/Action

ITO 8-4   Migrate divisional databases from Lotus Approach to newer databases

Describe the business requirements or business problem driving this objective: Many divisional databases were developed in Lotus Approach which is no longer supported.

Describe the benefits to be derived from the successful completion of this objective: Lotus Approach is no longer supported within DNRC. Many Forestry employees have created databases in Lotus Approach that need to be converted to supported database applications such as SQL Server and newer versions of Microsoft Access.

Databases to be converted include: Fire billing data, legacy F300 and F1000 data, flight logs, historical grant files, burn permits, inventories, communications operations.

Describe the anticipated risks associated with this objective: Loss of data from older databases.

What is the timeframe for completion of this objective: Ongoing FY2010 and FY2011

Describe the critical success factors associated with this objective: Conversion of critical databases to newer, supported databases.

Supporting Objective/Action

ITO 8-5   DNRC Fire Finance system

Describe the business requirements or business problem driving this objective: The agency is in need of a central system for estimating fire costs, tracking actual costs, tracking payables and tracking personnel costs.

Describe the benefits to be derived from the successful completion of this objective: A unified system for fire finances would allow for better tracking of fire fighting expenses, cost estimating for fires, reimbursement of costs from partner agencies and improved tracking of finances for auditing.

Describe the anticipated risks associated with this objective: Cost and time for development of a new system.

What is the timeframe for completion of this objective: Kickoff in mid 2010 and completion in FY2011

Describe the critical success factors associated with this objective: Establishing a unified financial system to better track the cost of fighting wildland fires.

Goal Number 9:

ITG 8   Create a new applications for the Conservation and Resource Development Division (CARDD)

Description: CARDD has specific needs to manage project grants, work with conservation districts and handle water reservations that need to be improved. CARDD will work with IT staff to determine whether current systems can be modified to meet division needs or new applications built to store and process information.

Benefits: CARDD will see efficient use of information, the ability to report on grant and loan activity and better management of Montana land and water resources.

Does this goal support the State IT Strategic Plan? If so, how? Develop IT Resources in an organized, deliberative and cost-effective manner.

Supporting Objective

ITO 9.1   Create a grants application tracker for CARDD

Describe the business requirements or business problem driving this objective: CARDD has a specific need to track project applications and their status (Funded, not-funded, pending, etc.) Additional information is also needed on resources benefited. Improved reporting capabilities such as termination letters, grant reports and funding is also needed. In addition, this information should link to DNRC or state GIS resources to allow creation of interactive maps that show grant project locations.

Describe the benefits to be derived from the successful completion of this objective:

Better fiscal management and tracking of contracts, grants and loans made by the agency. Ability to determine where state dollars are spent on projects, e.g. water loans, waste water treatment, restoration projects, etc.

Describe the anticipated risks associated with this objective: Development of the system may take longer than anticipated. System may not meet all divisional goals.

What is the timeframe for completion of this objective: A Statement of Work has been developed for this project and the project is on hold awaiting funding approval.

Describe the critical success factors associated with this objective: Ability to connect to the CGS system for fiscal tracking.

Supporting Objective

ITO 9.2   Develop a database of Conservation Districts

Describe the business requirements or business problem driving this objective: CARDD works with all of the state conservation districts and needs a better method of tracking information on each conservation district and its activities.

Describe the benefits to be derived from the successful completion of this objective: Improved information gathering and updates on conservation districts, their activities and staff. A web front end would facilitate updates to the directory.

Describe the anticipated risks associated with this objective: Finding time with agency staff to develop the database.

Describe how this objective supports the agency IT goal: Provides efficient use of staff and ability to better manage projects in the agency.

What is the timeframe for completion of this objective: FY2011

Describe the critical success factors associated with this objective: Determining the scope of the project, building the database and populating it with information.

Supporting Objective

ITO9.3   Develop a water reservations database for CARDD and conservation districts

Describe the business requirements or business problem driving this objective: CARDD has a business need to track water reservations by conservation districts. This information includes: authorized users, authorized amounts, location of diversions, acres irrigated, etc.

Describe the benefits to be derived from the successful completion of this objective: Improved management of water reservations by the conservation districts and the ability to ensure they meet agency requirements and state law.

Describe the anticipated risks associated with this objective: Finding time with agency staff to develop the database.

Describe how this objective supports the agency IT goal: Provides efficient use of staff and ability to better manage projects in the agency.

What is the timeframe for completion of this objective: FY2011

Describe the critical success factors associated with this objective: Determining the scope of the project, building the database and populating it with information.

Goal Number 10:

ITG 10   Manage IT needs of Reserve Water Rights Compact Commission Sunsetting

Description: Determine what RWRCC information needs to be preserved and what information need to migrate to the Water Resources Division. Finish work on RWRCC projects

Benefits: Orderly migration of information from RWRCC as it sunsets in 2013.

Does this goal support the State IT Strategic Plan? If so, how? Yes. Efficient development of IT resources and improved government services.

SECTION 5: IT INITIATIVES (FY2010 – FY 2015)

5.1 IT Initiatives

DNRC does not have any new IT Initiatives planned for FY2012- FY 2015. The agency is evaluating needs for document imaging and storage and will update this section if an initiative is proposed in this area.

IT Initiatives continuing from the FY2008-1013 plan

Title: User Friendly Interface for Forest Management Software
Description: Increase Technical Services Section (TSS) budget for fiscal year 2010 to purchase a site license or 25 copies of Forest Biometrics Research Institutes, Forest Projection System (FPS) software and hire a computer programmer for 12 months through a temporary services employment company. The computer programmer would be directed by TSS to develop a user friendly interface for FPS that can be used by DNRC foresters and specialists to plan and evaluate silvicultural practices. The computer programmer would also be directed to participate in database design, create forms, and create reports for a calendar recall system for forest management operations.
Cost: $168,000 - Funded for FY 2010-2011

Title: Rewrite Trust Land Management System (TLMS) to use latest smart client technology

Description: The current TLMS system is written with a Access front end and SQL Server 2000 database. The system requires updating to a new web-based front end and migration to the lastest version of the SQL Server database.

Cost: $170,000 - Funded for FY2010-2011

SECTION 6: ENTERPRISE ALIGNMENT

6.1 State Strategic Plan for IT Alignment

Please indicate which Communities of Interest your agency plans to be involved in. Agencies are asked to select at least one, but can select as many as needed. Further planning work by the communities of interest will take place following submission of agency IT plans.

☑ Government Services

☐ Public Safety

☐ Human Resources

☑ Environmental

☐ Education

☐ Economic

☐ Cultural Affairs

☐ Finance

DNRC will work with other state agencies on a various Communities of Interest. In the Environmental category, the agency will be coordinating the state Restoration Map application and the website www.restoration.mt.gov a clearinghouse for restoration project information.

For Government Services, the agency plans to contribute to statewide efforts for a grants website with grant information and applications.

SECTION 7: EXPENDITURES

7.1 Planned Agency IT Expenditures

Expense Category	FY2010		FY2011		FY2012		FY2013		FY2014		FY2015
Personal Services	$835,888		$852,605		$861,132		$869,743		$878,440		$887,225
Operating Expenses	$1,011,301		$1,073,030		$1,073,030		$1,284,809		$1,284,809		$1,297,657
Initiatives	$148,000		$65,000		0		0		0		0
Other expenditures	0		0		0		0		0		0
Totals	1,995,189		1,990,635		1,934,162		2,154,552		2,163,249		2,184,882

SECTION 8: ENTERPRISE IT INVENTORY

8.1 Inventory Update

Has the Agency updated their IT Inventory Database as outlined in Section 8 of the instructions? Yes

Date that Agency last updated their IT Inventory: March 12, 2010

SECTION 9: ADDITIONAL INFORMATION - OPTIONAL

Other types of information that support the agency's IT Plan.   Some examples might include other COI participation, reference to other IT plans such as GIS plan, eGovernment plan, security plan, staffing issues and constraints, etc.

DNRC has updated its **GIS strategic plan**. The GIS strategic plan will provide for development of GIS applications and databases for the current and next biennium and tactical steps to be taken to implement GIS software and programs for the agency.